

Name \_\_\_\_\_ Period \_\_\_\_\_

## STUDY GUIDE: PLANTS

Note: Also study your labeled diagrams of the different plant structures (flower and leaf).

### Facts about Fertilizers

1. Why do plants need nitrogen?
2. Why do plants need phosphorus?
3. Why do plants need potassium?
4. List 4 micronutrients.
5. Why is it bad for plants to have too much fertilizer?

### Tropisms

6. The way a plant grows or bends in response to touch is called \_\_\_\_\_.
7. The way a plant grows or bends in response to water is called \_\_\_\_\_.
8. The way a plant grows or bends in response to gravity is called \_\_\_\_\_.
9. The way a plant grows or bends in response to light is called \_\_\_\_\_.
10. A positive stimulus is when a plant moves \_\_\_\_\_ the stimulus.

### Life Cycle of Plants (Note: Also know the order of the life cycle!)

11. The \_\_\_\_\_ allows seeds to withstand extreme temperatures.
12. Seed leaves are called \_\_\_\_\_.
13. An example of a dicot would be \_\_\_\_\_.
14. The important food-storing tissue that nourishes the developing embryo is the \_\_\_\_\_.
15. The process by which a seed becomes a plant is called \_\_\_\_\_.

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### Structure of Flowering Plants

16. The structure that supports the anther is the \_\_\_\_\_.
17. The structure that supports the stigma is the \_\_\_\_\_.
18. The male reproductive parts of a flower are collectively called the \_\_\_\_\_ and the female reproductive parts are collectively called the \_\_\_\_\_.
19. The \_\_\_\_\_ produces ovules, which contain egg nuclei.
20. The \_\_\_\_\_ produces pollen, which contains sperm nuclei.

### Reproduction of Flowering Plants

21. A \_\_\_\_\_ flower has both male and female reproductive parts.
22. The union of a sperm with an egg is called \_\_\_\_\_.
23. The transfer of pollen from an anther to a stigma is called \_\_\_\_\_.
24. Why are some flowers colorful and scented?
25. Name 3 things that aid in pollination.

### Leaves

26. The waxy film that covers the upper epidermis and protects the leaf from losing too much water is the \_\_\_\_\_.
27. The layer of cells between the upper and lower epidermis that contains palisade cells and a spongy layer is the \_\_\_\_\_.
28. The tiny openings throughout the lower epidermis of a leaf that aid in gas exchange are called \_\_\_\_\_.
29. When \_\_\_\_\_ fill with water, they swell and develop an opening.
30. What part of a leaf carries water and other substances?

### Overview

31. Seeds need \_\_\_\_\_ but NOT \_\_\_\_\_ to germinate, and plants need both \_\_\_\_\_ AND \_\_\_\_\_ to grow.
32. What is the function of each of the following plant parts?
  - Roots
  - Flowers
  - Leaves